WHAT IS CLAIMED IS:

1. A semiconductor substrate comprising a porous semiconductor having a porous layer with an impurity concentration distribution varying in the depth direction.

2. A semiconductor substrate according to claim 1, wherein said porous layer comprises a semiconductor selected from the group consisting of a semiconductor containing at least one of silicon and germanium, a semiconductor containing gallium and arsenic, and a semiconductor containing gallium and phosphorus, and a semiconductor containing gallium and nitrogen.

3. A semiconductor substrate according to claim 1, wherein said porous layer comprises at least two sublayers having different impurity concentrations.

4. A semiconductor substrate according to claim 3, wherein said porous layer is formed on one surface of a supporting substrate, and comprises a high-porosity sublayer having a low impurity concentration and a high porosity and at least one low-porosity sublayer having a high impurity concentration and a low porosity, and said high-porosity sublayer is provided on the surface, at the side of said

supporting substrate, of at least one low-porosity sublayer.

5. A semiconductor substrate according to claim 4, wherein said supporting substrate and said porous layer each comprise p-type silicon containing a p-type impurity, the low-porosity sublayer has a p-type impurity concentration of 1×10^{19} cm^{-3} or more, and the high-porosity sublayer has a p-type impurity concentration of less than 1×10^{19} cm^{-3}.

6. A semiconductor substrate according to claim 1, further comprising a semiconductive thin film provided on one face of said porous layer.

7. A semiconductor substrate according to claim 6, wherein said semiconductive thin film comprises a semiconductor selected from the group consisting of a semiconductor containing at least one of silicon and germanium, a semiconductor containing gallium and arsenic, and a semiconductor containing gallium and phosphorus, and a semiconductor containing gallium and nitrogen.

8. A semiconductor substrate according to claim 6, wherein said semiconductive thin film comprises a single crystal.

9. A semiconductor substrate according to claim 1, wherein said porous layer has unevenness.

10. A semiconductor substrate comprising a porous layer comprising a porous semiconductor containing an impurity with a content of 1×10^{18} cm^{-3} or more.

11. A semiconductor substrate comprising a porous layer provided by pore formation in an epitaxial growth layer.

12. A thin-film semiconductive member formed on one surface of a supporting substrate with a porous layer provided therebetween, and separated from said supporting substrate by cleavage in said porous layer, said porous layer comprising a porous semiconductor having an impurity concentration varying in the depth direction.

13. A thin-film semiconductive member according to claim 12, wherein said porous layer comprises a semiconductor selected from the group consisting of a semiconductor containing at least one of silicon and germanium, a semiconductor containing gallium and arsenic, and a semiconductor containing gallium and phosphorus, and a semiconductor containing gallium and nitrogen.

14. A thin-film semiconductive member according to claim 12, comprising a single crystal.

15. A thin-film semiconductive member according to claim 12, having unevenness.

16. A thin-film semiconductive member formed on one surface of a supporting substrate with a porous layer provided therebetween, and separated from said supporting substrate by cleavage in said porous layer, said porous layer comprising a porous semiconductor having an impurity concentration of 1×10^{18} cm^{-3} or more.

17. A thin-film semiconductive member formed on one surface of a supporting substrate with a porous layer provided therebetween, and separated from said supporting substrate by cleavage in said porous layer, said porous layer being provided by pore formation in an epitaxial growth layer.

18. A method for making a semiconductor substrate comprising:

a variant layer forming step for forming a variant impurity layer with an impurity concentration varying in the

depth direction on one surface of a supporting substrate; and

a porous layer forming step for forming a porous layer by providing pores in the variant impurity layer by anodic oxidation so that the porosity in the porous layer varies in the depth direction.

19. A method for making a semiconductor substrate according to claim 18, wherein a variant impurity layer including at least two sublayers having different impurity concentrations is formed in said variant layer forming step, and a porous layer including at least two sublayers having different porosities is formed in said porous layer forming step.

20. A method for making a semiconductor substrate according to claim 19, wherein at least two sublayers having different impurity concentrations is formed on one surface of the supporting substrate in said variant layer forming step.

21. A method for making a semiconductor substrate according to claim 19, wherein, in said variant layer forming step, a growth layer is deposited on one surface of the supporting substrate, and then an impurity is diffused

into the growth layer so as to form at least two sublayers having different impurity concentrations.

22. A method for making a semiconductor substrate according to claim 18, wherein, in said variant layer forming step, said variant impurity layer comprises a semiconductor selected from the group consisting of a semiconductor containing at least one of silicon and germanium, a semiconductor containing gallium and arsenic, and a semiconductor containing gallium and phosphorus, and a semiconductor containing gallium and nitrogen.

23. A method for making a semiconductor substrate according to claim 18, wherein, in said variant layer forming step, a low-impurity sublayer comprising a semiconductor having a low impurity concentration is formed and a high-impurity sublayer comprising a semiconductor having a high impurity concentration is formed on the surface, away from the supporting substrate, of the low-impurity sublayer.

24. A method for making a semiconductor substrate according to claim 23, wherein, in said variant layer forming step, each of said supporting substrate and said variant impurity layer comprises p-type silicon containing a

p-type impurity, the low-impurity sublayer has a p-type impurity concentration of 1×10^{19} cm^{-3} or more, and the high-impurity sublayer has a p-type impurity concentration of less than 1×10^{19} cm^{-3}.

25. A method for making a semiconductor substrate according to claim 18, wherein said one surface of the supporting substrate is uneven.

26. A method for making a semiconductor substrate according to claim 18, further comprising a step for forming a semiconductive thin film on the surface, away from the supporting substrate, of the porous layer.

27. A method for making a semiconductor substrate according to claim 26, wherein said semiconductive thin film is formed of a single crystal provided by epitaxial growth.

28. A method for making a semiconductor substrate according to claim 26, said semiconductive thin film comprises a semiconductor selected from the group consisting of a semiconductor containing at least one of silicon and germanium, a semiconductor containing gallium and arsenic, and a semiconductor containing gallium and phosphorus, and a semiconductor containing gallium and nitrogen.

29. A method for making a semiconductor substrate according to claim 18, further comprising a heating step of heating the porous layer for recrystallization.

30. A method for making a semiconductor substrate comprising:

a high-impurity layer forming step for forming a high-impurity layer comprising a semiconductor having an impurity concentration of 1×10^{18} cm^{-3} or more on one surface of a supporting substrate; and

a porous layer forming step for forming pores in the high-impurity layer by anodic oxidation to form a porous layer having different porosities in the depth direction.

31. A method for making a semiconductor substrate according to claim 30, wherein in said high-impurity layer forming step, the high-impurity layer is formed by epitaxial growth.

32. A method for making a thin-film semiconductive member comprising:

a variant layer forming step for forming a variant impurity layer with an impurity concentration varying in the depth direction on one surface of a supporting substrate;

a porous layer forming step for forming a porous layer by providing pores in the variant impurity layer by anodic oxidation so that the porosity in the porous layer varies in the depth direction;

a step for forming a semiconductive thin film on the surface, away from the supporting substrate, of the porous layer; and

a separation step for separating the semiconductive thin film from the supporting substrate by cleavage in the porous phase.

33. A method for making a thin-film semiconductive member comprising:

a high-impurity layer forming step for forming a high-impurity layer comprising a semiconductor having an impurity concentration of 1×10^{18} cm^{-3} or more on one surface of a supporting substrate;

a porous layer forming step for forming pores in the high-impurity layer by anodic oxidation to form a porous layer having different porosities in the depth direction;

a step for forming a semiconductive thin film on the surface, away from the supporting substrate, of the porous layer; and

a separation step for separating the semiconductive thin film from the supporting substrate by cleavage in the

porous phase.